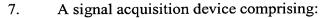
WHAT IS CLAIMED IS:

- 1. A signal acquisition process comprising:
- a) performing an acquisition dwell on a plurality of cells within a time/frequency uncertainty range to detect a set of cells having the largest correlation peaks;
- b) performing an initial verification dwell on the set of cells detected in step a by comparing the peak of each cell to a threshold and retaining those cells having a peak at least as great as the threshold;
- c) performing an acquisition dwell on another plurality of cells within the time/frequency uncertainty range to detect another set of cells having the largest correlation peaks; and
- d) performing a subsequent verification dwell on the cells retained in step b and an initial verification dwell on the set of cells detected in step c by comparing the peak of each cell to the threshold and retaining those cells having a peak at least as great as the threshold.
 - 2. The process of claim 1 wherein acquisition dwells and verification dwells are performed in parallel.
 - 3. The process of claim 1 wherein acquisition dwells and verification dwells are performed serially.
 - 4. The process of claim 1 wherein the set of cells from step a comprises the 6 cells having the largest correlation peaks.
 - 5. The process of claim 4 wherein the set of cells from step c comprises 6-N cells having the largest correlation peak, where N is the number of cells retained in step b.
 - 6. The process of claim 5 wherein the threshold is set such that N is no greater than 1.

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a plurality of acquisition correlators adapted to perform an initial acquisition dwell and a series of subsequent acquisition dwells on a plurality of cells within a time/frequency uncertainty range, each acquisition dwell to detect a set of cells having the largest correlation peaks; and

a plurality of independent correlators, each adapted to:

receive a detected cell from the acquisition correlators;

perform an initial verification dwell on the detected cell by comparing the peak of the detected cell to a threshold and retaining the detected cell only if it has a peak at least as great as the threshold; and

perform at least one subsequent verification dwell on the retained cell.

- 8. The signal acquisition device of claim 7 wherein the acquisition correlators and the independent correlators are adapted to perform acquisition dwells and verification dwells in parallel.
- 9. The signal acquisition device of claim 7 wherein the acquisition correlators and the independent correlators are adapted to perform acquisition dwells and verification dwells serially.
- 10. The signal acquisition device of claim 7 wherein the set of cells detected during the initial acquisition dwell comprises the 6 cells having the largest correlation peaks.
- 11. The signal acquisition device of claim 10 wherein the set of cells detected during subsequent acquisition dwells comprises 6-N cells having the largest correlation peak, where N is the number of cells retained by the independent correlators.
- 12. The signal acquisition device of claim 11 wherein the threshold is set such that N is no greater than 1.

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13. A system for tracking the location of an object using signals transmitted by GPS satellites, said system comprising:

an antenna associated with the object for receiving GPS signals; and

a signal acquisition device in operative communication with the antenna, the device including: 5

> a plurality of acquisition correlators adapted to perform an initial acquisition dwell and a series of subsequent acquisition dwells on a plurality of cells within a time/frequency uncertainty range, each acquisition dwell to detect a set of cells having the largest correlation peaks; and

a plurality of independent correlators, each adapted to:

receive a detected cell from the acquisition correlators; perform an initial verification dwell on the detected cell by comparing the peak of the detected cell to a threshold and retaining the detected cell only if it has a peak at least as great as the

perform at least one subsequent verification dwell on the retained cell.

14. A signal acquisition process comprising:

threshold; and

- a) performing a plurality of acquisition dwells on a plurality of cells within a time/frequency uncertainty range, each acquisition dwell to detect "x" number of cells having the largest correlation peaks;
- b) comparing the cells detected during the acquisition dwells and retaining "x" number of cells having the largest correlation peaks; and
- c) performing a verification dwell on the "x" number of cells by comparing the peak of each cell to a threshold and retaining only those cells having a peak that exceeds the threshold.

15. The process of claim 14 further comprising:

after step c, performing at least one additional acquisition dwell on another plurality of cells within the time/frequency uncertainty range to detect "x" number of cells having the largest correlation peaks;

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comparing the cells detected during the additional acquisition dwell with the cells retained in step c and retaining "x" number of cells having the largest correlation peaks; and repeating step c.

- 16. The process of claim 14 wherein "x" equals 12.
- 17. The process of claim 14 wherein the threshold is such that only one cell is retained.
 - 18. A signal acquisition device comprising:

a plurality of acquisition correlators adapted to perform acquisition dwells on a plurality of cells within a time/frequency uncertainty range to detect "x" number of cells having the largest correlation peaks;

a processor adapted to compare the cells detected during the acquisition dwells and retain "x" number of cells having the largest correlation peaks; and

a plurality of independent correlators, each adapted to:

receive a detected cell from the processor;

perform an initial verification dwell on the detected cell by comparing the peak of the detected cell to a threshold and retaining the detected cell only if it has a peak at least as great as the threshold; and perform a subsequent verification dwell on the retained cell.

- 19. The signal acquisition device of claim 18 wherein to perform a subsequent verification on the retained cell the independent correlators are adapted to return the retained cell to the processor for further comparison with other cells detected during additional acquisition dwells.
- 20. The signal acquisition device of claim 18 wherein the acquisition correlators are adapted to be reconfigured to function as the independent correlators.
 - 21. The signal acquisition device of claim 18 wherein "x" equals 12.

- 22. The signal acquisition device of claim 18 wherein the threshold is such that only one cell is retained.
- 23. A system for tracking the location of an object using signals transmitted by GPS satellites, said system comprising:

an antenna associated with the object for receiving GPS signals; and a signal acquisition device in operative communication with the antenna, the device including:

a plurality of acquisition correlators adapted to perform acquisition dwells on a plurality of cells within a time/frequency uncertainty range to detect "x" number of cells having the largest correlation peaks;

a processor adapted to compare the cells detected during the acquisition dwells and retain "x" number of cells having the largest correlation peaks; and a plurality of independent correlators, each adapted to:

receive a detected cell from the processor;

perform an initial verification dwell on the detected cell by comparing the peak of the detected cell to a threshold and retaining the detected cell only if it has a peak at least as great as the threshold; and

perform a subsequent verification on the retained cell.

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